



FIRST RECORD OF *Podiceps occipitalis* GARNOT, 1826 (PODICIPEDIFORMES, PODICIPEDIDAE) IN RIO GRANDE DO SUL STATE, BRAZIL

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Abstract: The Silvery Grebe *Podiceps occipitalis* (Podicipediformes, Podicipedidae) is a species distributed in South America that inhabits mainly open freshwater lakes. In Brazil its occurrence is rare. Here we present the first record for this species in Rio Grande do Sul state, Brazil. An adult individual was observed on June 23rd, 2018, foraging in a small lake, in the municipality of Palmeira das Missões. This record increases the regional knowledge about the Neotropical bird species that use the state in their possible migration routes.

Keywords: Atlantic Forest; geographic distribution; migration; Silvery Grebe.

The Silvery Grebe *Podiceps occipitalis* Garnot, 1826 (Podicipediformes, Podicipedidae) inhabits freshwater or slightly alkaline lakes in South America (Narosky & Yzurieta 2003, Piacentini *et al.* 2015, Llimona *et al.* 2019). The species is found in Argentina, including the Falkland Islands/Malvinas, Bolivia, Peru, Paraguay and Chile (Dott 1984, Couve & Vidal 2003, Maillard *et al.* 2006). In Brazil, it is considered rare (Grantsau 2010) and its occurrence is known in isolated locations among the states of São Paulo, Paraná, Santa Catarina and Rio de Janeiro (Bornschein *et al.* 2004, Schunck 2006, Zaltman

2018). *Podiceps occipitalis* presents about 25 cm, usually with light feather colored, a yellow tuft on the side of the head, and red iris (Couve & Vidal 2003, Narosky & Yzurieta 2003). It feeds mainly on insects and aquatic crustaceans (Hilsenbeck 1979). This species is globally classified as Least Concern (BirdLife International 2016), but there is lack of data to establish its national conservation status (ICMBio 2016). *Podiceps occipitalis* lives mainly in small groups and probably some populations may be in decline (Couve & Vidal 2003, Birdlife International 2016).

Here we provide the first record of *P. occipitalis* in Rio Grande do Sul state, Brazil. We also gathered previous records of this species in Brazil through the digital collection of the Brazilian Journal of Ornithology and the online database Wiki Aves (<http://www.wikiaves.com.br/>) using “*Podiceps occipitalis*” as keyword. Previous records in Brazil have been documented in the states of São Paulo (Schunck 2006, Antunes 2017, Gussoni 2018), Paraná (Bornschein *et al.* 2004), Santa Catarina (Bornschein *et al.* 2004) and Rio de Janeiro (Zaltman 2018). The compiled records and the new record reported in this study are presented together (Figure 1).

On June 23rd, 2018, an adult (undetermined sex) of *P. occipitalis* was observed and documented through a photographic record (L.E.S. Santos) in the municipality of Palmeira das Missões in the northern portion of Rio Grande do Sul state, Brazil. The vegetation in the region is characterized by

steppe formation, and transition between the Mixed and Seasonal Ombrophilous Forest in the Atlantic Forest Biome domain (IBGE 2004). The climate of the region is temperate, with annual temperature between 16°C and 18°C, and the annual precipitation can reach 2500mm (Alvares *et al.* 2013).

The individual was in a small artificial lake (28°03′58.6″ S, 53°19′31.5″ W) with about three hectares located on the Crestani’s Farm. The lake area is surrounded by a vast agricultural matrix (*i.e.*, soy, corn). The individual moved by the extension of the lake where it made small dives near aquatic plants (Figure 2). The individual was identified based on the species morphological characters as: fan’ shaped yellow ear-tufts, red iris and blackish nape, which distinguishes it from other grebes (*e.g.*, Couve & Vidal 2003, Narosky & Yzurieta 2003, Sigrist 2014). The yellow ear-tufts were not so visible in the

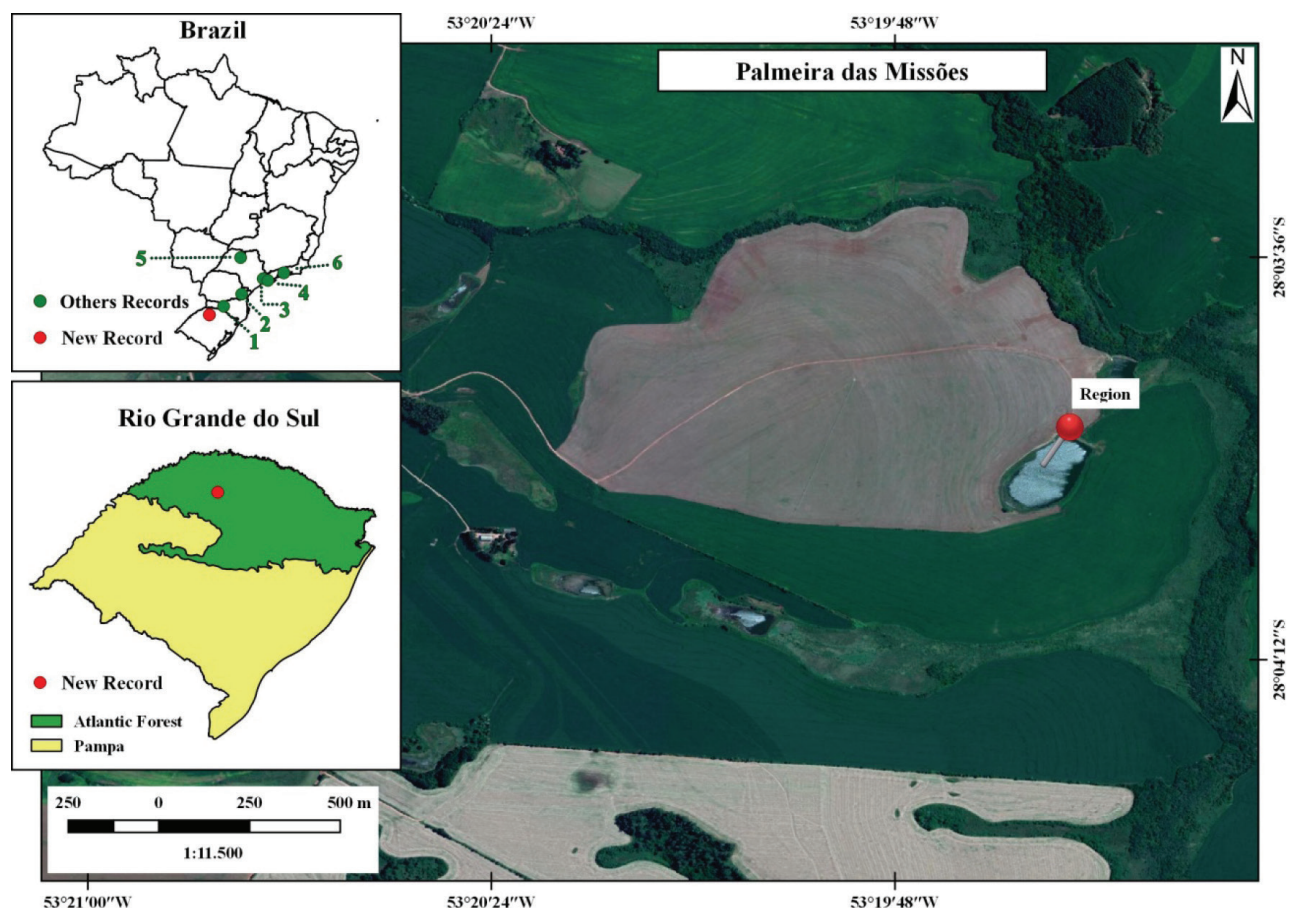


Figure 1. New (red dot) and previous (green dots) records of *Podiceps occipitalis* Garnot, 1826 (Podicipediformes, Podicipedidae) in the Brazilian territory. Previous records: 1 = municipality of Agua Doce, Santa Catarina state; 2 = municipality of Curitiba, Paraná state; 3 = municipality of São Paulo, São Paulo state; 4 = municipality of Bertiooga, São Paulo state; 5 = municipality of Bady Bassitt, São Paulo state; 6 = municipality of Rio de Janeiro, Rio de Janeiro state.



Figure 2. Silvery Grebe *Podiceps occipitalis* Garnot, 1826 (Podicipediformes, Podicipedidae) recorded in the municipality of Palmeira das Missões, state of Rio Grande do Sul, Brazil. (Photo: Luis E. S. dos Santos).

documented *P. occipitalis*. This variation may be associated with the reproductive resting period, since during this period this plumage is less evident (Sigrist 2014, Llimona *et al.* 2019).

Podiceps occipitalis populations migrate from the southern portion of their distribution to north in winter, more specifically to northern Argentina and adjacent regions (Storer 1979, Venegas 1986, Fjeldså & Krabbe 1990). The record of this species in Brazil can be the result of accidental occurrence beyond areas normally covered during migratory movements (Bornschein *et al.* 2004). Due to the sparse records of individuals, this species is classified as vagrant (VAG) in Brazil (Somenzari *et al.* 2018). Irregular or accidental movements such as these previously reported may be repeated in subsequent years (Bornschein *et al.* 2004, Vallejos *et al.* 2009). This was evidenced when, in 2006, six individuals of *P. occipitalis* were registered for the first time in the state of São Paulo, in Guarapiranga Reservoir, and then after 12 years one individual of *P. occipitalis* was registered again in the same locality (Schunck 2018).

As proposed by Bornschein *et al.* (2004), *P. occipitalis* seems to arrive in Brazilian territory through corridors along the Uruguay River and Parana River valleys. The municipality of Palmeira das Missões, where the species was registered, has two tributaries of the Uruguay River: Rio Guarita and Rio de Várzea. The regions near these tributaries have many natural and artificial flooded areas (*e.g.*, wetlands, ponds and lakes) which could facilitate the displacement of the species. According to Bornschein *et al.* (2004), Água Doce and Curitiba municipalities also have environments similar to those reported above.

Thus, the present study reports the first confirmed record of *P. occipitalis* in Rio Grande do Sul state, Brazil, increasing the regional knowledge about the Neotropical bird species that use the state in their possible migration routes. Although there are few documented records of the species in Brazilian territory, this record is not enough to support a potential distribution pattern yet. However, probably the species occur in other isolated locations. It is important to record in the

literature additional information about *P. occipitalis* aiming to fill knowledge gaps in its ecology, for example, if the animal is reproducing in the region and the area could be considered part of its life area or only wandering, since its distribution is still unknown in the state.

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